Standards for opioid use disorder care : An assessment of Nordic approaches

Gedeon, Charlotte

2019-06

Gedeon , C , Sandell , M , Birkemose , I , Kakko , J , Runarsdottir , V , Simojoki , K , Clausen , T , Nyberg , F , Littlewood , R & Alho , H 2019 , ' Standards for opioid use disorder care : An assessment of Nordic approaches ' , Nordisk alkohol- & narkotikatidskrift , vol. 36 , no. 3 , pp. 286-298 . https://doi.org/10.1177/1455072518815322

http://hdl.handle.net/10138/311852
https://doi.org/10.1177/1455072518815322

Overview

NAD

Nordic Studies on Alcohol and Drugs
2019, Vol. 36(3) 286–298

DOI: 10.1177/1455072518815322
journals.sagepub.com/home/nad
SAGE

Standards for opioid use disorder care: An assessment of Nordic approaches

Charlotte Gedeon
Solstenen Addiction Centre, Skåne, Sweden

Mikael Sandell
Capio Maria, Stockholm and Skåne, Sweden

Inge Birkemose
Odense Kommune, Misbrugsbehandling, Denmark

Johan Kakko
Umeå University, Sweden

Valgerður Rúnarsdóttir
SAA's Vogur Hospital, Reykjavik, Iceland

Kaarlo Simojoki
Helsinki University Hospital, Finland A-Clinic Foundation/ A-clinic oy, University of Helsinki, Finland

Thomas Clausen
Norwegian Centre for Addiction Research, University of Oslo, Norway

Fred Nyberg
Uppsala University, Sweden

Richard Littlewood
applied strategic, London, UK

Hannu Alho
Abdominal Centre, University of Helsinki and Helsinki University Hospital, Helsinki, Finland

Abstract

Aims: Outcomes in opioid use disorder (OUD) in Nordic countries have improved with integrated treatment and harm-reduction programmes. Approaches and the standard of care are different across the region. Evidence of treatment needs and current approaches are defined from evidence to inform development of a common standard. **Method:** Evidence of population sizes and treatment approach collected. Common standards for care (harm reduction, pharmacotherapy, psychology/social therapy) defined for each country. **Results:** Evidence defines number in treatment; potential population needing treatment not defined for all countries. Populations

Submitted: 18 June 2018; accepted: 31 October 2018

Corresponding author:
Charlotte Gedeon, Solstenen i Skåne, Östra Mårtensgatan 15, 223 61 Lund, Sweden.
Email: charlotte.gedeon@solstenen.nu

sizes, treatment access (ratio in treatment programme compared to total country population) defined: Sweden 4,000 in OUD care (access ratio 40); Finland 3,000 (55); Norway 8,000 (154); Denmark 7,500 (132). Approach to treatment similar: integrated treatment programmes standard. Care provided by specialists in outpatient clinics/primary care; secondary care/inpatient services are available. Harm reduction is limited in Sweden but available and more accessible elsewhere. Treatment entry criteria: access relatively unlimited in Norway and Denmark, more limited in Finland and Sweden. Standards of care defined: easy access to high-quality services, individual planning, care not limited by time, management of relapse, education for patients, continuous engagement, holistic approach including management of comorbidities, needle equipment programmes without limit, treatment in prisons as community. **Conclusion:** There are opportunities to improve OUD care in the Nordics. Policy makers and clinicians can advance OUD care and share common success factors. Collaborative work across the Nordic countries is valuable. Further research in clinical practice development can yield important results for the benefit of patients with OUD.

Keywords
comparison, Denmark, Finland, Iceland, Norway, opioid use disorder, Sweden

Opioid use disorder (OUD) is associated with risk of mortality and morbidity (Dematteis et al., 2017) including adverse mental and somatic health outcomes, poor perceived quality of life, unemployment (Callahan et al., 2015), homelessness (National Alliance to End Homelessness, 2016), family disruption, social instability, criminal activities (Daley, 2013) as well as loss of economic productivity (Jiang, Lee, Lee, & Pickard, 2017). Pharmacotherapy with opioid agonist therapy (OAT) in an integrated programme with psychosocial care is proven to improve outcomes and can address the health and social consequences of OUD (Nielsen et al., 2016). Needle equipment programmes are effective in limiting harms from blood-borne viruses. Other approaches such as mutual help and Narcotics Anonymous are also important treatment options.

Sweden, Denmark, Finland, Norway, and Iceland have similar welfare and national healthcare system approaches with open access to healthcare in general. There are similarities in substance-use culture across these countries (Selin et al., 2015) and guidance for treatment of people with OUD is available in Sweden (Socialstyrelsen, 2015), Denmark (Sundhedsstyrelsen, 2017), Finland (Alho et al., 2012), Norway (Helsedirektoratet, 2016), and Iceland (SAA National Center of Addiction Medicine, 2016).

Pharmacotherapy is an established part of treatment systems in these countries (Skretting & Rosenqvist, 2010); although approaches to OUD care differ in each country. This work compares population needs and approaches to OUD care across the region to define standards for practice.

Materials and methods

A comparison of approaches to OUD care was completed; care was described by collecting evidence of relevant populations, service type and access. Evidence describing the size, access, and approach for OUD care was collected from publications of national agencies concerned with substance-use disorders and peer-reviewed publications recommended by experts in the therapy area. Evidence sources were selected in a standard manner retrieving the most recent official government data describing OUD populations. Two reviewers familiar with the field assessed the evidence sources independently and extracted relevant

data. Results of the evidence collection and analysis were reviewed by experts in the field (more than 10 years' experience in OUD care in the relevant countries). A recommendation for a standard of care was developed based on a comparison of current observed approaches across countries.

Results

Assessment was completed for Sweden, Denmark, Finland, Norway, and Iceland (Table 1).

Population treatment needs and access

In Sweden, the population with potential need for OUD care is likely 29,500, as based on national patient and prison registries (Statens Folkhälsoinstitut, 2010); other sources describe different groups within this population including point prevalence estimates of persons involved in injecting drugs and those involved in heroin use (8,000–13,000) (Folkhalsomyndigheten, 2014; Urban, Lindholm, & Säfvenberg, 2016). In Denmark, the population with potential need for OUD care is 13,000 based on the national health registry data (Selin et al., 2015; Skretting & Rosenqvist, 2010; Sundhedsstyrelsen, 2014). In Finland, the number of problem opioid users is estimated to be 15,000 based on national hospital discharge registries and the police information system (Ollgren et al., 2014; Selin et al., 2015; Varjonen, 2014). In Norway, the population of high-risk opioid users or number of injecting drug users is 7,700–12,600 (SIRUS Norwegian Institute for Alcohol and Drug Research, 2014; Skretting & Rosenqvist, 2010) based on mortality data on drug-related deaths and questionnaire-based surveys among policy and social services. In Iceland, the population of active opioid users is 200 from the main substance misuse treatment centre (unpublished data, 2017). Opioid use profiles among people with OUD differ: injected heroin use is common in Denmark (Skretting & Rosenqvist, 2010), Norway (Helsedirektoratet, 2010; Bretteville-Jensen & Amundsen, 2006), and Sweden (Skretting & Rosenqvist, 2010); illicit use of diverted buprenorphine is predominant in Finland (Selin et al., 2015); in Iceland almost all patients attending OUD treatment reported predominantly injected morphine use (Rúnarsdóttir, 2014). Relative levels of treatment engagement for the countries assessed are different. Estimated numbers engaged with treatment programmes are Norway (8,000) (Granerud & Toft, 2015), Denmark (7,500) (Sundhedsstyrelsen, 2014), Sweden (4,000) (Most recent estimate, likely an underestimated figure) (Socialstyrelsen, 2017), Finland (3,000) (National Institute for Health and Welfare Finland, 2017) and Iceland (130) (unpublished data, 2017). The index of treatment access (based on the number of patients in OUD care, annual estimate, as a ratio of the total national population, all citizens) indicates higher access to OUD care in Norway (ratio 154) and Denmark (132); access to care is more limited in Finland (55) and Sweden (40). (Iceland was not assessed due to small national population.)

Approach to treatment

The approach to OUD management is defined for each country (Table 2). The approach to OUD care is similar across the Nordic countries; treatment is based on integrated programmes of OAT medication and psychosocial therapy in the context of similar welfare and national state-provided healthcare systems. Housing and social benefits, such as long-term disability pension, may be provided when appropriate from the municipality.

Outpatient care based on similar integrated programmes of medical and psychosocial therapy is the common model for treatment of OUD in all countries (Skretting & Rosenqvist, 2010). In Sweden and Iceland, patients may be advised or required to start with inpatient care under intensive monitoring (Hansdóttir, Rúnarsdóttir, & Tyrfingsson, 2013). Criteria to enter treatment programmes described in national guidelines differ across countries. In Denmark,

Table 1. Key studies defining opioid-use disorder (OUD) population in Nordic countries.

Country	Population size (*n*)	Description of metric	Year*	Study supported by	Description of data collection	Reference
Sweden	29,500	Problem drug users[§]	2007	Statens Folkhälsoinstitut (National Institute of Public Health)	Population size estimated by a truncated Poisson method from PAR (national patient registry) and prison service record in each county	(Statens Folkhälsoinstitut, 2010)
	8,000	PWID	2011	The Public Health Agency (Folkhalsomyndigheten)	Population size estimated by data extraction from national patient registries, identifying diagnosis of drug abuse	(Folkhalsomyndigheten, 2014)
	7,237	People addicted to opioids	2010	The National Board of Health and Welfare (Socialstyrelsen)	Number estimated from identifying diagnosis of opioid addiction from patient registries	(Socialstyrelsen, 2012)
	8,000–13,000	Heroin users	N.D.	N.D.	Value referenced in a study by Umeå University on OUD treatment. Original data obtained from online source Internetmedicin.se	(Urban, Lindholm, & Säfvenberg, 2016)
Denmark	13,000 (10,066–16,821)	PWID	2008	Danish Heath and Medicines Authority (Sundhedsstyrelsen)	Number estimated by data extraction from the National Board of Health registry of substance abusers	(Selin et al., 2015; Sundhedsstyrelsen, 2014, 2016)
Finland	12,700–15,100	Opioid users	2012	Danish Heath and Medicines Authority (THL)	Population analysis based on data extraction from national registries: HILMO (hospital discharge registry), PATJA (the national police information system)	(Ollgren et al., 2014; Selin et al., 2015; Varjonen, 2014)
Norway	8,600–12,600	PWID	2008	Norwegian Institute for Alcohol and Drug Research (SIRUS[§§])	Population estimated by both mortality multiplier method and questionnaire-based surveys among the police and the social services in the municipalities on types of substances, frequency and method of drug consumption	(SIRUS Norwegian institute for Alcohol and Drug research, 2009)
	8,400 (7,200–10,100)	PWID	2012		Number estimated from mortality multiplier method based on mortality data on drug-related deaths in the year	(SIRUS Norwegian Institute for Alcohol and Drug Research, 2014)
	7,700 (6,200 –10,300)	High-risk opioid users	2012		Number estimated from mortality multiplier method based on mortality data on opioid-related deaths in the year	(SIRUS Norwegian Institute for Alcohol and Drug Research, 2014)

(continued)

Table 1. (continued)

Country	Population size (*n*)	Description of metric	Year*	Study supported by	Description of data collection	Reference
Iceland	600–700	PWID[§§§]	2017	National Centre of Addiction Medicine (SÁÁ)	Population was estimated based on data from the main substance-abuse treatment centre in Iceland	Unpublished data 2017
	200	Active PWID who use opioids	2017		Population was estimated based on data from the main substance-abuse treatment centre in Iceland	Unpublished data 2017

*The year the study was conducted. [§]Data indicated for problem drug users, not only problematic opioid users, accurate estimation for problem opioid users not available. [§§]Incorporated to Folkehelseinstituttet (Norwegian Institute of Public Health) on Jan 2016. [§§§]Mostly stimulants.
HILMO = Sairaaloiden avo-ja laitos-hoidon hoitoilmoitusrekisteri (The Hospitals of Open and Institutional Care Registry); N.D. = not defined; PAR = Patientregistret (Patient registry); PATJA = Poliisi-asiain tietojärjestelmä (Police Information System); PWID = People who inject drugs; SÁÁ = Samtök áhugafólks um áfengis- og vímuefnavandann; SIRUS = Statens Institutt for Rusmiddelforskning; THL = Terveyden ja Hyvinvoinnin Laitos.

Table 2. Opioid-use disorder (OUD) population and treatment system in the Nordic countries.

		OUD profile			Approach to OUD management						
								Medication options***			
Country (pop., Million)	Consensus OUD pop. size (*n*)	Range, low (*n*)	Range, high (*n*)	Type	Access to NEP	Patients in treatment*	Treatment Index** (in 100,000)	Met (%)	Bup, Bup/nal (%)	Criteria for treatment suggested in national guidelines	Treatment location****
Sweden (9.9)	29,000	8,000[1]	29,500[2]	Heroin[3]	Limited[4,5]	4,000[#,6]	40	45[7]	55	Diagnosis of OUD for 12 months, minimum 20 years old (unless special reason)[8]	Specialist clinics[5]
Denmark (5.7)	17,000	10,000[9]	17,000	Heroin[3]	Widely available[10]	7,500[11]	132	82[§,12]	18	Diagnosis of OUD, willingness to participate, assess for unsuitability of alternative treatment options[13]	Specialist clinics[13]
Finland (5.5)	12,000	13,000[14]	15,000[14]	Bup[14]	Widely available[15]	3,000[16]	55	38[14]	62[§§]	Diagnosis of OUD, failure in other previous treatment[15]	Specialist clinics[3]
Norway (5.2)	15,000	6,000[17]	10,000[17]	Heroin [18]	Widely available[19]	8,000[20]	154	39[21]	61[§§§]	Diagnosis of OUD, age considered although no hard limit (in people under 18 years old OAT only offered in special cases)[22]	Primary care [19]
Iceland (0.3)	200 (Unpublished data)	–	–	Morphine, oxycodone, fentanyl (Unpublished data)	Widely available[23]	130	NA	5[24]	95[§§§§]	Diagnosis of OUD[25]	Central specialist clinic[26]

OUD = opioid-use disorder; pop. = population; NEP = needle equipment programme; OAT = opioid agonist therapy; Met = methadone; Bup = buprenorphine; Bup/nal = buprenorphine/naloxone.

[1](Folkhalsomyndigheten, 2014), [2](Statens Folkhälsoinstitut, 2010), [3](Skretting & Rosenqvist, 2010), [4,5](Folkhälsomyndigheten, 2017; Swedish National Institute of Public Health, 2012), [6](Socialstyrelsen, 2017), [7](Socialstyrelsen, 2012), [8](Socialstyrelsens, 2016), [9](Sundhedsstyrelsen, 2016), [10](Bjerge, Duke, & Frank, 2015), [11](Sundhedsstyrelsen, 2014), [12](Selin et al., 2015), [13](Sundhedsstyrelsen, 2008), [14](Varjonen, 2014), [15](Alho et al., 2012), [16](National Institute for Health and Welfare Finland, 2017), [17](SIRUS Norwegian Institute for Alcohol and Drug Research, 2014), [18](Helsedirektoratet, 2010), [19](Norwegian Institute for Alcohol and Drug Research, 2012), [20](Granerud & Toft, 2015), [21](Waal, Bussesund, Clausen, Skeie, & Lillevold, 2016), [22](Helsedirektoratet, 2010), [23](Fridjonsdottir, 2016), [24](Rúnarsdóttir, 2014), [25](National Institute on Drug Abuse, 2012), [26](Hansdóttir, Rúnarsdóttir, & Tyrfingsson, 2013).

*Patients enrolled in OAT treatment; **The numbers of patients in OUD care as a ratio of total population; ***Other options such as injectable methadone and medical heroin use available in special circumstances, e.g., in some practices in Denmark; ****Most frequent treatment locations; [#]Data obtained from a questionnaire-based national survey, number likely an underestimation as not all sites responded; [§]Data apply to existing patients;, for new patients enrolled, 64% given Met, 36% Bup (Sundhedsstyrelsen, 2016); [§§]Buprenorphine 4%, buprenorphine/naloxone 58%; [§§§] Buprenorphine 36%, buprenorphine/naloxone 24%; [§§§§]Most patients on buprenorphine/naloxone.

Finland, Iceland and Norway criteria for access to services are minimal. In Sweden, a diagnosis of OUD for at least 12 months is required for treatment entry and the minimum age for receiving OAT is 20 years old with exceptions for special reasons (Socialstyrelsens, 2016).

Choice of medication options for OUD management varies. Common choices for OAT include methadone, buprenorphine/naloxone fixed-dose combination product, and single agent monotherapy with buprenorphine. Methadone is the most common choice in Denmark (Selin, 2013; Selin et al., 2015); buprenorphine and fixed-dose combination product of buprenorphine/naloxone are widely used in Sweden (Selin et al., 2015; Socialstyrelsen, 2012) and Norway (Ding, Mosdøl, Hov, & Staumann, 2016; Selin et al., 2015). In Finland, buprenorphine/naloxone is most common: there is very limited prescribing of buprenorphine as a result of the common practice of buprenorphine misuse and diversion (Selin et al., 2015; Varjonen, 2014). In Iceland most patients are treated with buprenorphine/naloxone (Hansdóttir et al., 2013; Selin et al., 2015).

All countries operate some form of integrated needle equipment programme (NEP) for harm reduction; accessibility is high in Denmark (Bjerge, Duke, & Frank, 2015), Finland (National Institute of Health and Social Welfare, 2016), Iceland (Fridjonsdottir, 2016), and Norway (Norwegian Institute for Alcohol and Drug Research, 2012). In Sweden, access to NEP was restricted until 2017; progress has been made but access is still difficult or limited for many people (Folkhälsomyndigheten, 2017; Swedish National Institute of Public Health, 2012).

Discussion

Effective OUD treatment improves outcomes: it reduces illicit drug use and demand on the illicit drug market at individual and community levels (Dematteis et al., 2017; Sumnall, Bates, & Jones, 2017; Wodak, 2011), potentially limiting future opioid use (The National Center on Addiction and Substance Abuse, 2017). Access to long-term and sustained coverage of harm reduction interventions is associated with lower levels of risky behaviour and lower prevalence of infectious diseases (Martin et al., 2012; Strang et al., 2012; Vickerman, Martin, Turner, & Hickman, 2012).

In theory, OUD treatment is available for all citizens at no or insignificant cost in the countries assessed, all of which have similar healthcare systems. Despite this similar foundation, this work shows important differences in OUD care for Nordic countries. Access to care is different with higher levels of engagement in Norway and Denmark, and lower levels in Sweden and Finland. Entry criteria are an important determinant of this difference. Access to services to reduce harm, such as needle equipment programmes, is limited in Sweden and reduces the ability of citizens to avoid preventable risk behaviour. This access level has changed in Sweden but remains distinctly different from other countries.

This summary of the differences and similarities in OUD care across this region is the basis for a definition of a set of simple standards which should apply generally. These are described in groups considering a journey a patient might take from initial engagement to assessment and treatment:

During "Engagement, diagnosis and treatment assessment", making decisions openly and in collaboration with patients, including confirmation of the OUD diagnosis, recording all drug use, assessing somatic and psychiatric co-morbidities, and discussing treatment options are important.

Developing a treatment or management plan centred around relevant goals, tailored to individual needs, is important. This includes assessment of different starting points, risks, treatment goals, potential outcomes, with patients being well-informed on the scope of long-term care and the standards for the expected level of conduct and compliance.

For treatment choice, ongoing therapy and completion, it is important to adopt an integrated approach considering elements of pharmacotherapy, psychiatric and social interventions, which is holistic and includes the management of other frequent somatic co-morbidities such as hepatitis C virus (HCV), HIV, and other mental health problems for successful outcomes.

Important outcomes include control of craving, ongoing opioid and other drugs consumption, and management of somatic and psychiatric comorbidities, as well as subjective improvement of overall quality of life.

Buprenorphine/naloxone, buprenorphine and methadone are common choices in pharmacotherapy: decision making should be based on a careful consideration of efficacy, safety, comorbidities, any preceding treatments, guidelines and patients' preference and individual needs (Dematteis et al., 2017). Buprenorphine/naloxone fixed-dose combination product is recommended in national treatment guidelines as a key choice (Alho et al., 2012; Helsedirektoratet, 2010; Socialstyrelsen, 2017; Sundhedsstyrelsen, 2008). The choice of medical product should not preclude focus on planning other forms of social support such as stable housing, employment, and other meaningful daily activities that are important in promoting wider improvement in all aspects of life.

At the beginning of the treatment programme, more intensive input is recommended to allow close monitoring and careful titration to ensure patients receive an appropriate OAT dose, and to minimise risks of overdose and likelihood of problems with "on top" opioid use.

As treatment progresses and patients stabilise, regimens may evolve from intensive daily visits towards self-management of picking up doses from a pharmacy. An assessment for suitability of take-home medication should be implemented across all treatment services. For patients using take-home medication, it is important to ensure continuous contact with clinical professionals to help predict problems, avoid risk and relapse, minimise risk of diversion, and provide assistance if necessary.

A flexible treatment plan with scope for changes, based on patients' preferences and ongoing assessment, improves outcomes; an inflexible plan may be counterproductive. Treatment duration should not be limited based on arbitrary grounds – treatment can continue for as long as needed, with continuous support from an integrated team of stakeholders according to patients' perceived needs for counselling and assistance. Developing a working approach with patients' input, with regular reviews of goals and progress, offers the opportunity to educate patients to conduct self-evaluation to catch early signs of relapse and actively ask for help.

Relapse is common and should be considered as part of the recovery process. Relapse can be addressed with increased intensity of planned intervention, for example more regular visits to clinics, more input from psychosocial support such as counselling and peer support. The choice of medication and dosage should be reconsidered; dose might need to be increased if there are signs of "on top" opioid use. Concomitant health problems such as psychiatric co-morbidities may need to be reassessed and treated.

Some patients may complete therapy with significant support by a carefully programmed approach; careful planning of timing and assessment of patients' motivation and decisions are important. Achieving abstinence should be planned carefully and agreed with the patient, with a thorough discussion on whether he or she is sufficiently motivated and has the personal and social stability to cope and solve problems.

A pragmatic approach for both the delivery of evidence-based treatment, i.e., OAT and harm reduction, is important. Wide access to harm reduction will potentially serve as an entry point to services for those underserved for healthcare and hard to reach, and it may be a first step towards more formal care. On a practical level, access to NEP and other harm-reduction interventions should be offered without restriction. Increase in differentiated treatment options tailored to individualised needs should be considered in countries with lower participation in therapy. Examples such as primary care and NEP centres as key points of treatment entry and evaluation can be considered. Treatment should be widely available including in prisons. Prison OUD care should be the same high quality as community care. Treatment for comorbidities including mental health and HCV infection should be easily available.

This work defines the needs of populations based on available evidence describing OUD groups. It is difficult to estimate the size of populations with OUD because of the criminal nature of illicit drug use. Evidence collected here represents the best available profile of populations with OUD; population estimates and related needs for treatment can be improved with further work. An index of persons recorded in treatment compared to national country population is used. This is not ideal, and it would be more conventional to compare to total population potentially requiring treatment. The total value is not available for Sweden and introducing this figure as an estimate is problematic and likely would remove the focus from the insights to be drawn from the metric used. Research – including collaborative regional programmes with common approaches to measurement – to identify the size and types of the population needs and reasons for non-participation should be supported. Evidence on the impact of the continuing observed levels of access to treatment in OUD can be used to support future policy decisions that promote continuing access to integrated treatment with OAT. This can include comparative analysis leveraging existing similar population attributes and approaches to healthcare in general with the opportunity presented by existing pan-Nordic healthcare registries of activity and outcomes healthcare data. Insights from this research are key to making decisions about the future of OUD care aiming to achieve increased engagement to address dependence, improve overall health with management of comorbidities, quality of life and citizen participation leading to better social and family outcomes matched with reduced criminal activity and wider benefits to society.

Conclusion

Progress in OUD care and improvement in outcomes has been significant since the introduction of integrated treatment and harm-reduction programmes. National policy and practice must be optimal to ensure equity of access to services providing easy access to high-quality treatment programmes with OAT and NEP. Decision makers including policy makers, providers of services, researchers and clinicians can improve outcomes by adopting and extending observed best practice across the region.

Acknowledgements

The authors are grateful for the contributions of Dr Li Li and Tara Lumley in preparing analysis and editorial works.

Declaration of conflicting interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors disclosed receipt of the following financial support for the research, authorship, and/or publication of this article: Expert meeting attendance and support services for this work were supported by a grant from Indivior. Indivior did not influence

the meeting discussion, nor the content of this review.

References

Alho, H., Aalto, M., Eskola, K., Jousilahti, P., Kahila, H., & Kivitie-Kallio, S., ... ettama työryhmä. (2012). Huumeongelmaisen hoito, Käypä hoito -suositus [Treatment of drug problem, current recommendation]. *Duodecim*, *128*(17), 1817–1818.

Bjerge, B., Duke, K., & Frank, V. A. (2015). The shifting roles of medical stakeholders in opioid substitution treatment: A comparison between Denmark and the UK. *Drugs and Alcohol Today*, *15*(4), 216–230. doi:10.1108/DAT-07-2015-0033

Bretteville-Jensen, A. L., & Amundsen, E. J. (2006). *Omfang av sprøytemisbruk i Norge [Scope of drug abuse in Norway]*. Oslo, Norway: Folkehelseinstituttet.

Callahan, S., LoSasso, A., Olson, B., Beasley, C., Nisle, S., Campagna, K., & Jason, L. A. (2015). Income generation in recovering heroin users: A comparative analysis of legal and illegal earning. *J of Offender Rehabilitation*, *54*(5), 338–349.

Daley, D. C. (2013). Family and social aspects of substance use disorders and treatment. *Journal of Food and Drug Analysis*, *21*(4 Supl.). doi:10.1016/j.jfda.2013.09.038

Dematteis, M., Auriacombe, M., D'Agnone, O., Somaini, L., Szerman, N., Littlewood, R., ... Soyka, M. (2017). Recommendations for buprenorphine and methadone therapy in opioid use disorder: A European consensus. *Expert Opinion on Pharmacotherapy*, *18*(18), 1987–1999. doi:10.1080/14656566.2017.1409722

Ding, K. Y., Mosdøl, A., Hov, L., Staumann, G. H., & Vist, G. E. (2016). *The effects of concurrent prescription of benzodiazepines for people undergoing opioid maintenance treatment: A systematic review*. Report 2016. Oslo, Norway: Norwegian Institute of Public Health.

Folkhalsomyndigheten. (2014). *National report – Sweden (2014)*. Retrieved from http://www.emcdda.europa.eu/attachements.cfm/att_239764_EN_2014%20National%20Report%20-%20Sweden.pdf

Folkhälsomyndigheten. (2017). *Sweden – Country drug report 2017*. Retrieved from http://www.emcdda.europa.eu/system/files/publications/4504/TD0116923ENN.pdf

Fridjonsdottir, H. S. (2016). The story of developing needle exchange services in Iceland. *Journal of Addictions Nursing*, *27*(3), 157–159. doi:10.1097/JAN.0000000000000131

Granerud, A., & Toft, H. (2015). Opioid dependency rehabilitation with the opioid maintenance treatment programme: A qualitative study from the clients' perspective. *Substance Abuse: Treatment, Prevention, and Policy*, *10*(1), 1–9. doi:10.1186/s13011-015-0031-4

Hansdóttir, I., Rúnarsdóttir, V. A., & Tyrfingsson, T. (2013). Addiction treatment in Iceland. In N. el-Guebaly, G. Carrà, & M. Galanter (Eds.). *Textbook of addiction treatment: International perspectives* (pp. 1–13). Milan, Italy: Springer.

Helsedirektoratet. (2010). Nasjonal retningslinje for legemiddelassistert rehabilitering ved opioidavhengighet [National guideline for medication-assisted rehabilitation for opioid addiction]. Retrieved from https://helsedirektoratet.no/Lists/Publikasjoner/Attachments/100/IS-1701-Legemiddelassistert-rehabilitering-ved-opioidavhengighet.pdf

Helsedirektoratet. (2016). Behandling og rehabilitering av rusmiddelproblemer og avhengighet Nasjonal faglig retningslinje for behandling og rehabilitering av rusmiddelproblemer og avhengighet [Treatment and rehabilitation of substance abuse problems and addiction. National professional guidelines for the treatment and rehabilitation of drug problems and dependence]. Retrieved from https://helsedirektoratet.no/Retningslinjer/Behandling%20og%20rehabilitering%20av%20rusmiddelproblemer%20og%20avhengighet.pdf

Jiang, R., Lee, I., Lee, T. A., & Pickard, A. S. (2017). The societal cost of heroin use disorder in the United States. *PLoS ONE*, *12*(5). doi:10.1371/journal.pone.0177323

Martin, N. K., Vickerman, P., Miners, A., Foster, G. R., Hutchinson, S. J., Goldberg, D. J., & Hickman, M. (2012). Cost-effectiveness of hepatitis C virus antiviral treatment for injection drug

user populations. *Hepatology*, *55*(1), 49–57. doi: 10.1002/hep.24656

National Alliance to End Homelessness. (2016). Opioid abuse and homelessness. Retrieved from https://endhomelessness.org/resource/opioid-abuse-and-homelessness/

National Centre of Addiction Medicine. (2016). *Árs-rit meðferðarsviðs SÁÁ [SÁÁ Annual Report]*. Retrieved from http://www.emcdda.europa.eu/system/files/publications/4524/TD0416915ENN.pdf

National Institute for Health and Welfare Finland. (2017). Finland country drug report 2017 (pp. 1–21). Retrieved from http://www.emcdda.europa.eu/system/files/publications/4524/TD0416915ENN.pdf

National Institute of Health and Social Welfare. (2016). Substance abuse treatment. Retrieved from https://www.thl.fi/en/web/alcohol-tobacco-and-addictions/substance-abuse-treatment

National Institute on Drug Abuse. (2012). *Principles of drug addiction treatment: A research-based guide* (3rd ed.). Retrieved from https://www.drugabuse.gov/publications/principles-drug-addiction-treatment/frequently-asked-questions/how-do-other-mental-disorders-coexisting-drug-add

Nielsen, S., Degenhardt, L., Larance, B., Gowing, L., Kehler, C., & Lintzeris, N. (2016). Opioid agonist treatment for pharmaceutical opioid dependent people (Protocol). *The Cochrane Databse of Systematic Reveiws*. doi:10.1002/14651858.CD011117

Norwegian Institute for Alcohol and Drug Research. (2012). *The drug situation in Norway*. Oslo, Norway: SIRUS Norwegian Institute for Alcohol and Drug Research.

Ollgren, J., Forsell, M., Varjonen, V., Alho, H., Brummer-Korvenkontio, H., Kainulainen, H., . . . Seppälä, T. (2014). Amfetamiinien ja opioidien ongelmakäytön yleisyys Suomessa 2012 [The prevalence of problems with amphetamines and opioids in Finland 2012]. *YHTEISKUNTAPOLITIIKKA*, *79*, 5.

Rúnarsdóttir, V. (2014). A few things about Iceland and SAA data and addiction treatment. Retrieved from https://saa.is/english/saa-its-data-and-addiction-treatment/

Selin, J. (2013). *Local substance abuse treatment in the Helsinki region*. Helsinki, Finland: Nordic Centre for Welfare and Social Issues.

Selin, J., Perälä, R., Stenius, K., Partanen, A., Rosenqvist, P., & Alho, H. (2015). Opioid substitution treatment in Finland and other Nordic countries: Established treatment, varying practices. *NAD Nordic Studies on Alcohol and Drugs*, *32*(3), 311–324. doi:10.1515/nsad-2015-0028

SIRUS Norwegian Institute for Alcohol and Drug Research. (2009). *The drug situation in Norway 2009*. Retrieved from https://www.fhi.no/globalassets/dokumenterfiler/rapporter/2009-og-eldre/drug_situation_norway_2009.pd.pdf (accessed 29 November 2018).

SIRUS Norwegian Institute for Alcohol and Drug Research. (2014). *The drug situation in Norway 2014*. Retrieved from http://wpstatic.idium.no/www.sirus.no/2015/01/TheDrugSituationInNorway2014.pdf

Skretting, A., & Rosenqvist, P. (2010). Shifting focus in substitution treatment in the Nordic countries. *Nordic Studies on Alcohol and Drugs, 27,* 581–598. Retrieved from http://www.sirus.no/filestore/Automatisk_opprettede_filer/skretting_rosenqvist_shiftingfocus10.pdf

Socialstyrelsen. (2012). *Kartläggning av läkemedelsassisterad behandling vid opiatberoende [Mapping of medication-assisted treatment for opioid addiction]* (Report no. 2012-11-5). Retrieved from https://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/18875/2012-11-5.pdf

Socialstyrelsen. (2015). *Läkemedelsassisterad behandling vid opiatberoende – Slutsatser och förslag [Medication-assisted treatment for opioid addiction – Conclusions and suggestions]*. Retrieved from http://www.socialstyrelsen.se/publikationer2015/2015-3-35/Sidor/default.aspx

Socialstyrelsen. (2017). *Uppföljning av föreskrifter och allmänna råd om läkemedelsassisterad behandling vid opioidberoende (LARO) [Follow-up of regulations and general advice on medication-assisted treatment for opioid addiction]* (Report no. 2017-12-44). Retrieved from https://www.socialstyrelsen.se/Lists/Artikelkatalog/

Attachments/20805/2017-12-44.pdf (accessed 29 November 2018).

Socialstyrelsen. (2016). *Socialstyrelsens föreskrifter och allmänna råd om ordination och hantering av läkemedel i hälso- och sjukvården [The National Board of Health and Welfare's regulations and general advice on the prescribing and management of pharmaceuticals in the healthcare sector.]* (Report no. 2017-5-2). Retrieved from https://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/20604/2017-5-2.pdf

Socialstyrelsen. (2017). *Nationella riktlinjer för vård och stöd vid missbruk och beroende: Stöd för styrning och ledning [National guidelines for care and support in abuse and dependence: Support for management]*. Retrieved from https://www.socialstyrelsen.se/Lists/Artikelkatalog/Attachments/20778/2017-12-23.pdf

Statens Folkhälsoinstitut. (2010). *Narkotikabruket i Sverige [Drug use in Sweden]*. Retrieved from https://www.folkhalsomyndigheten.se/contentassets/785864a3fd7a468fb5a39ba03dc6387b/r2010-13-narkotikabruket-i-sverige.pdf

Strang, J., Babor, T., Caulkins, J., Fischer, B., Foxcroft, D., & Humphreys, K. (2012). Drug policy and the public good: Evidence for effective interventions. *The Lancet*, *379*(9810), 71–83. doi:10.1016/S0140-6736(11)61674-7

Sumnall, H. R., Bates, G., & Jones, L. (2017). Evidence review summary: Drug demand reduction, treatment and harm reduction. Retrieved from http://www.emcdda.europa.eu/system/files/attachments/6237/EuropeanResponsesGuide2017_BackgroundPaper-Evidence-review-drug-interventions.pdf (accessed 29 November 2018).

Sundhedsstyrelsen. (2008). Guidance on medical treatment of drug abusers in substitution treatment for opioid dependence.

Sundhedsstyrelsen. (2014). *Narkotikasituationen i Danmark 2014 [The drug situation in Denmark 2014]*. Retrieved from https://www.sst.dk/da/udgivelser/2014/~/media/A38F8CB85658486688B6655C87345E40.ashx?m=.pdf

Sundhedsstyrelsen. (2014). *National Report (2013 data) to the EMCDDA by the Reitox National Focal Point: Denmark New Development, Trends*. Retrieved from http://www.emcdda.europa.eu/system/files/publications/1011/att_233879_EN_NR2014%20FINAL%2C%20and%20included%20chapter%206.4%20version%2015122014.pdf

Sundhedsstyrelsen. (2016). *Narkotikasituationen i Danmark 2016 – Nationale data [The drug situation in Denmark 2016 – National data]*. Retrieved from https://www.sst.dk/da/sundhed-og-livsstil/~/media/07101779E7554638B36EEDBC00234590.ashx

Sundhedsstyrelsen. (2017). *Vejledning til læger, der behandler opioidafhængige patienter med substitutionsmedicin*. Copenhagen, Denmark: Sundhedsstyrelsen. Retrieved from https://www.sst.dk/da/sundhed-og-livsstil/narkotika/~/media/796D337DC66D4F72A8991141B88BD699.ashx

Swedish National Institute of Public Health. (2012). "Sweden": New development, trends and in-depth information on selected issues. 2012 National report (2011 data) to the EMCDDA by the Reitox National Focal Point. Retrieved from http://www.emcdda.europa.eu/system/files/publications/715/Sweden_NR2012_443640.pdf

The National Center on Addiction and Substance Abuse. (2017). *Ending the opioid crisis: A practical guide for state policymakers*. Retrieved from https://www.centeronaddiction.org/sites/default/files/Ending%20the%20Opioid%20Crisis_A%20Practical%20Guide%20for%20State%20Policymakers_The%20National%20Center%20on%20Addiction%20and%20Substance%20Abuse_October%202017_0.pdf

Urban, K., Lindholm, A., & Säfvenberg, M. (2016). Läkemedelsassisterad rehabilitering vid opioidberoende - En kvalitativ studie om vad substitutionsbehandling faktiskt innebär [Replacement therapy for opioid dependence: A qualitative study of what replacement therapy actually involves]. Retrieved from http://www.diva-portal.org/smash/get/diva2:933257/FULLTEXT01.pdf

Varjonen, V. (2014). Finland drug situation 2014 (Report no. 3/2015). Retrieved from https://www.julkari.fi/bitstream/handle/10024/125772/URN_ISBN_978-952-302-427-4.pdf?sequence=1

Vickerman, P., Martin, N., Turner, K., & Hickman, M. (2012). Can needle and syringe programmes and opiate substitution therapy achieve substantial reductions in hepatitis C virus prevalence? Model projections for different epidemic settings. *Addiction*, *107*(11), 1984–1995. doi:10.1111/j.1360-0443.2012.03932.x

Waal, H., Bussesund, K., Clausen, T., Skeie, I., & Lillevold, P. H. (2016). *Statusrapport 2015 Mot grensene for vekst og nytte [Status Report 2015 Towards the limits of growth and benefits]*. Oslo, Norway: Universitetet i Oslo, Senter for rus-og avhengighetsforskning SNkftsrT. Retrieved from https://oslo-universitetssykehus.no/seksjon/PublishingImages/seraf-rapport-nr-1-2016-statusrapport-2015.pdf

Wodak, A. (2011). Global commission on drug policies: Demand reduction and harm reduction. Retrieved from http://www.globalcommissionondrugs.org/wp-content/themes/gcdp_v1/pdf/Global_Com_Alex_Wodak.pdf (accessed 29 November 2018).